

WHAT IS CLAIMED IS:

1. Operation equipment for a vehicle comprising:

a display having a touch switch with a touch sensor for detecting an operation of a passenger or a driver of the vehicle;  
an electronic control unit; and  
a driving sensor for detecting the vehicle moving or stopping,  
wherein the display displays the touch switch corresponding to a predetermined function,

wherein the electronic control unit determines that the predetermined function is allowed to perform when the driving sensor detects the vehicle stopping, and

wherein the electronic control unit determines that the predetermined function is allowed to perform when the touch sensor detects the operation of the passenger.

2. The equipment according to claim 1,

wherein the display further includes a plurality of touch switches, which correspond to predetermined functions, respectively, and

wherein the electronic control unit determines that part of the predetermined functions is prohibited to perform when the touch sensor detects the operation of the driver and the driving sensor detects the vehicle moving.

3. The equipment according to claim 2,

wherein the touch sensor detects an approach position of a hand or a finger when the driver or the passenger moves the hand

or the finger closer to the display, and

wherein the touch sensor detects a touch position of a finger when the driver or the passenger touches the display.

4. The equipment according to claim 3,

wherein the electronic control unit distinguishes the touch position from the approach position, and distinguishes the approach position of the hand from the approach position of the finger on the basis of a signal from the touch sensor.

5. The equipment according to claim 4,

wherein the vehicle is a right hand drive vehicle, and the touch switch is disposed on a right side of the display,

wherein the display is disposed between a passenger seat and a driver seat of the vehicle, and

wherein the electronic control unit determines the operation of the passenger when the touch sensor detects the approach position of the hand.

6. The equipment according to claim 4,

wherein the vehicle is a left hand drive vehicle, and the touch switch is disposed on a left side of the display,

wherein the display is disposed between a passenger seat and a driver seat, and

wherein the electronic control unit determines the operation of the passenger when the touch sensor detects the approach position of the hand.

7. The equipment according to claim 4, further comprising:  
a plurality of panel switches disposed outside of the display,  
wherein the touch switches are disposed on a periphery of the  
display, and

wherein each panel switch corresponds to another  
predetermined function.

8. The equipment according to claim 4,  
wherein the equipment provides a vehicle navigation system,  
wherein the electronic control unit is a navigation electronic  
control unit,

wherein the driving sensor is a parking brake sensor, and  
wherein the display displays at least a map of geography around  
the vehicle.

9. The equipment according to claim 3,  
wherein the electronic control unit distinguishes the touch  
position from the approach position on the basis of a signal from  
the touch sensor,

wherein the vehicle is a right hand drive vehicle, and the  
touch switch is disposed on a right side of the display,

wherein the display is disposed between a passenger seat and  
a driver seat of the vehicle, and

wherein the electronic control unit determines the operation  
of the passenger when the touch sensor detects the approach position  
moving from a left side to the right side of the display.

10. The equipment according to claim 3,

wherein the electronic control unit distinguishes the touch position from the approach position on the basis of a signal from the touch sensor,

wherein the vehicle is a left hand drive vehicle, and the touch switch is disposed on a left side of the display,

wherein the display is disposed between a passenger seat and a driver seat of the vehicle, and

wherein the electronic control unit determines the operation of the passenger when the touch sensor detects the approach position moving from a right side to the left side of the display.

11. The equipment according to claim 3,

wherein the electronic control unit distinguishes the touch position from the approach position on the basis of a signal from the touch sensor,

wherein the touch sensor is capable of detecting both of the approach position and the touch position simultaneously, and

wherein the electronic control unit determines the operation of the passenger when the touch sensor simultaneously detects both of the approach position and the touch position.

12. The equipment according to claim 11,

wherein the electronic control unit distinguishes the approach position of the hand from the approach position of the finger on the basis of the signal from the touch sensor, and

wherein the electronic control unit determines the operation

of the passenger when the touch sensor simultaneously detects both of the approach position of the hand and the touch position.

13. The equipment according to claim 3,  
wherein the touch sensor includes a thin film and a plurality of current supplies,

wherein the thin film is capable of forming a capacitor having a capacitance between the thin film and the hand or the finger in a case where the hand or the finger moves closer to the display or touches the display,

wherein the current supplies supply currents to the thin film,  
and

wherein the touch sensor detects the approach position and the touch position on the basis of the capacitance of the capacitor calculated by the currents.

14. The equipment according to claim 13,  
wherein the electronic control unit distinguishes the touch position from the approach position on the basis of the currents.

15. The equipment according to claim 14,  
wherein the electronic control unit distinguishes the approach position of the hand from the approach position of the finger on the basis of the currents.

16. The equipment according to claim 3,  
wherein the touch sensor includes a plurality of photo

acceptance devices and light emitting devices,

wherein the light emitting devices emit lights in a direction perpendicular to the display, respectively, and

wherein the touch sensor detects the hand or the finger in such a manner that the photo acceptance devices detect reflected lights reflected by the hand or the finger, respectively.

17. The equipment according to claim 16,

wherein the electronic control unit distinguishes the touch position from the approach position on the basis of the reflected lights detected by the photo acceptance devices.

18. The equipment according to claim 17,

wherein the electronic control unit distinguishes the approach position of the hand from the approach position of the finger on the basis of the reflected lights.